

ATTORNEY DOCKET NO.: LMX-138**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of Heinrich Lang et al.)	
)	
Serial No.: Not Yet Assigned)	Examiner: Unknown
)	
Filed Herewith)	Art Unit: Unknown
)	
For: Mirror Arrangement for Motor Vehicles)	

PRELIMINARY AMENDMENT

Box Amendment
 Commissioner for Patents
 Washington, DC 20231

Sir:

Please amend the application filed herewith as set forth below and consider the remarks that follow.

IN THE ABSTRACT

Please enter the attached abstract.

IN THE DRAWINGS

Please amend the Drawings as indicated in the attached Request for Approval of Drawings Changes.

IN THE SPECIFICATION

Please cancel the English language specification, which is a literal English language translation of the German priority document and, as such, contained numerous grammatical errors, awkward syntax, and generally did not conform to standard U.S. practice. Please substitute therefor the enclosed substitute

specification. The substitute specification corrects these matters and will greatly facilitate prosecution of the application. Applicants submit that no new matter is injected into the application by way of the substitute specification. A marked-up copy of the English language specification is enclosed for the Examiner's reference.

IN THE CLAIMS

Please cancel Claims 1-12 and enter new Claims 13 through 61 as follows:

That which is claimed:

--13. (New) A mirror arrangement affixable to a vehicle comprising:

a mirror housing with a mirror pane;

a functional device disposed in the mirror housing, the functional device configured to change a presentation of the mirror pane;

a control apparatus disposed in the mirror housing, the control apparatus in communication with the functional device; and

a mode switch disposed in the housing in communication with the control apparatus, the mode switch configured to be magnetically activated by a magnetic activation device, the activated mode switch and control apparatus cooperable to effect at least one operational mode of the functional device.

14. (New) The mirror arrangement of Claim 13, wherein the functional device is a plurality of functional devices selected from the group consisting of an optical

display device, a gyroscopic device, a mirror positioning apparatus, a temperature sensor, and combinations thereof.

15. (New) The mirror arrangement of Claim 14, wherein the optical display device is integrated in the mirror pane, the optical display device configured to be visible when activated by the mode switch via the control apparatus.

16. (New) The mirror arrangement of Claim 13, wherein the control apparatus is a computer, the computer configured to act as an interface between the functional device and the mode switch, the computer having at least one software program stored therein to activate the at least one operational mode when activated by the mode switch.

17. (New) The mirror arrangement of Claim 13, wherein the mode switch activates a diagnostic program to test the functional device.

18. (New) The mirror arrangement of Claim 17, wherein the mode switch is a plurality of mode switches.

19. (New) The mirror arrangement of Claim 18, wherein at least one of the mode switches is configured to selectively test the at least one operational mode.

20. (New) The mirror arrangement of Claim 18, wherein the plurality of mode switches are disposed apart from each other in the housing such that the

activation device selectively and separately activates the plurality of mode switches.

21. (New) The mirror arrangement of Claim 13, wherein the mode switch is located on an interior of the housing.

22. (New) The mirror arrangement of Claim 22, wherein the mode switch is located proximate the mirror pane.

23. (New) The mirror arrangement of Claim 13, wherein the activation device is disposed externally apart from the housing.

24. (New) The mirror arrangement of Claim 24, wherein the activation device is a permanent magnet, the permanent magnet configured to activate the mode switch from a position proximate the mode switch.

25. (New) The mirror arrangement of Claim 13, wherein the activation device activates the mode switch by a coded magnetic impulse, the impulse configured to initiate a discrete operation of the at least one operational mode.

26. (New) The mirror arrangement of Claim 13, further comprising a marking template having at least one indicator such that when the marking template is positioned proximate the mirror pane, the indicator indicates a position of the mode switch.

27. (New) The mirror arrangement of Claim 27, wherein the mirror pane has at least one shaped area and the marking template has at least one complementary shaped area such that the marking template can be oriented positively on the mirror pane to indicate the position of the mode switch.

28. (New) The mirror arrangement of Claim 27, wherein the marking template defines a label indicating a positive orientation of the marking template relative to the mirror pane.

29. (New) The mirror arrangement of Claim 27, wherein the mode switch is disposed proximate an interior of the mirror housing away from the mirror pane, the marking template defining a flexible extension configured to wrap about a portion of an exterior of the housing to indicate the position of the mode switch when the marking plate is positioned proximate the mirror pane.

30. (New) The mirror arrangement of Claim 30, wherein the flexible extension defines the at least one indicator and a legend thereon signifying a function of the mode switch.

31. (New) The mirror arrangement of Claim 27, wherein the marking template defines a plurality of indicators and a plurality of extensions having a plurality of legends thereon to signify a plurality of functions of a plurality of mode switches.

32. (New) A service kit for a vehicle mirror assembly having a housing defining an exterior and an interior, a control apparatus, at least one functional device, and a mode switch disposed in the interior, and a mirror pane attached to the exterior, the service kit comprising:

a template configured to be removably positioned proximate the mirror pane to mark externally a position of the mode switch;

an activation device configured to selectively activate the mode switch, the mode switch in electronic communication with the control apparatus and configured to activate a software program in the control apparatus to effect a discrete mode of operation by the at least one functional device.

33. (New) The service kit of Claim 32, wherein the mode switch is disposed proximate the mirror pane, the template configured to complement a shape of the mirror pane to indicate the position of the mode switch proximate the mirror pane.

34. (New) The service kit of Claim 33, wherein the template has a legend disposed thereon to signify a function of the mode switch.

35. (New) The service kit of Claim 32, wherein the mode switch is disposed in the interior apart from the mirror pane, the template having at least one flexible extension configured to wrap about an exterior portion of the housing to indicate the position of the mode switch.

36. (New) The service kit of Claim 35, wherein the template is cardboard.

37. (New) The service kit of Claim 32, wherein the control apparatus is a computer having a program responsive to a coded signal to selectively activate the mode switch, the activation device configured to deliver the coded signal to activate the at least one functional device.

38. (New) The service kit of Claim 37, wherein the activation device is a permanent magnet and the coded signal is a pulsed magnetic signal.

39. (New) A method of diagnostically servicing a vehicle mirror assembly having a mirror housing with at least one mirror pane, the method comprising the steps of:

a) providing an activation device configured to selectively activate from external the mirror housing a mode switch disposed in the mirror housing, the mode switch in communication with a control apparatus configured to activate a mode of operation of a functional device disposed in the mirror housing.

b) providing an indicator template to indicate a position of the mode switch, the indicator template defining a complementary shape to a shape of the at least one mirror pane for positive external placement proximate the at least one mirror pane;

c) positioning the indicator template proximate the at least one mirror pane to indicate the position of the mode switch;

- d) ascertaining the mode of operation of the mode switch from a legend disposed on the indicator template;
- e) programming an activation signal of the activation device to correspond to the ascertained mode of operation;
- f) positioning the activation device proximate the mode switch as indicated by the indicator template; and
- g) delivering the activation signal from the activation device to the mode switch to activate the mode of operation of the functional device for a diagnostic service.

40. (New) The method of Claim 39, further comprising the steps of:

performing the diagnostic service on the functional device during the activated mode of operation;

setting a reset signal in the activation device upon completion of the diagnostic service; and

delivering the reset signal from the activation device to the mode switch to return the functional device to a state in step a.

41. (New) The method of Claim 40, further comprising the step of removing the indicator template from proximate the at least one mirror.

42. (New) The method of Claim 39, wherein the indicator template has at least one extension having a mark disposed thereon to indicate the mode switch disposed in the mirror housing away from the at least one mirror pane.

43. (New) The method of Claim 42, further comprising the substep of wrapping the at least one extension about an external portion of the mirror housing to indicate the mode switch before step d.

44. (New) The method of Claim 39, wherein the activation device is a permanent magnet configured to deliver the activation signal as a coded magnetic pulse.

45. (New) A method of diagnostically servicing a vehicle mirror assembly having a mirror housing with a plurality of mirror panes, the method comprising the steps of:

a) providing a magnetic activation device configured to selectively activate from external the mirror housing a plurality of mode switches disposed in the mirror housing;

b) providing an indicator template configured for placement proximate the plurality of mirror panes, the indicator template defining a plurality of complementary shapes corresponding to the plurality of mirror panes;

c) placing the indicator template proximate the plurality of mirror panes to indicate a plurality of positions corresponding to the plurality of mode switches; and

d) selectively activating at least one of the mode switches to effect an operation of a functional device disposed in the mirror housing.

46. (New) The method of Claim 45, further comprising the substep of resetting the at least one activated mode switch.

47. (New) The method of Claim 45, wherein the indicator template is unitarily constructed.

48. (New) The method of Claim 47, wherein the indicator template is a plurality of individual indicator templates.

49. (New) The method of Claim 45, wherein the activation device selectively activates the at least one mode switch via a coded magnetic pulse, the at least one mode switch configured to communicate the pulse to a control apparatus to effect the operation of the functional device.

50. (New) A mirror arrangement for a vehicle comprising:

- a mirror housing with a mirror pane and a functional device disposed in the mirror housing, the functional device configured to change a presentation of the mirror pane; and

- a magnetic activation device configured for placement proximate the mirror housing to effect at least one operational mode of the functional device.

51. (New) The mirror arrangement of Claim 50, further comprising a control apparatus with a mode switch disposed in the mirror housing, the control apparatus in communication with the functional device, the mode switch

configured to be magnetically activated by the magnetic activation device, the magnetically activated mode switch cooperable with the control apparatus to effect at least one operational mode of the functional device.

52. (New) The mirror arrangement of Claim 50, wherein the functional device is a plurality of functional devices selected from the group consisting of an optical display device, a gyroscopic device, a mirror positioning apparatus, a temperature sensor, and combinations thereof.

53. (New) The mirror arrangement of Claim 50, wherein the mode switch activates a diagnostic program to test the functional device.

54. (New) The mirror arrangement of Claim 50, wherein the magnetic activation device is disposed externally apart from the mirror housing.

55. (New) The mirror arrangement of Claim 50, wherein the magnetic activation device activates the mode switch by a coded magnetic impulse, the impulse configured to initiate a discrete operation of the at least one operational mode.

56. (New) The mirror arrangement of Claim 50, further comprising a marking template having at least one indicator such that when the marking template is positioned proximate the mirror pane, the indicator indicates a position of the mode switch.

57. (New) A method of servicing a vehicle mirror assembly comprising the steps of:

- a) providing a mirror housing with a mirror pane;
- b) providing a magnetic activation device configured to selectively activate a mode switch disposed in the mirror housing, the magnetic activation device operable from external the mirror housing;
- c) placing the magnetic activation device proximate the mirror housing to selectively activate the mode switch; and
- d) activating a mode of operation of a functional device disposed in the mirror housing, the mode of operation configured for a diagnostic service.

58. (New) The method of Claim 57, further comprising the substep of providing an indicator template to indicate a position of the mode switch, the indicator template defining a complimentary shape relative to a shape of the mirror pane for positive placement of the indicator template proximate the mirror pane.

59. (New) The method as in Claim 58, wherein the indicator template has at least one extension having a mark disposed thereon to indicate the mode switch disposed in the mirror housing.

60. (New) The method as in Claim 59, further comprising the substep of programming an activation signal in the activation device to correspond to a selected mode of operation.

61. (New) The method as in Claim 60, further comprising the substep of positioning the activation device proximate the mode switch as indicated by the indicator template.--

REMARKS

In this Preliminary Amendment, Applicants have cancelled Claims 1-12 and added Claims 13-61. Claims 13, 32, 39, 45, 50 and 57 are Independent Claims and Claims 13-61 are pending.

Applicants have enclosed herewith a substitute specification and a marked up copy of the original specification in order to place the specification in more typical U. S. format. Applicants respectfully submit that new Claims 13-61 are patentable in view of the above Preliminary Amendment and respectfully request consideration and examination of the present application and the time allowance of the pending claims.

The Examiner is encouraged to contact the undersigned at his convenience should he have any questions regarding this application and to resolve any issued.

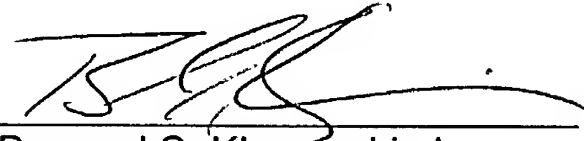
Please charge any fees required by this Preliminary Amendment to Deposit Account No. 04-1403.

Respectfully submitted,

DORITY & MANNING, P.A.

March 5, 2002

Date



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LMX-138
DE 201 05 791

Mirror Arrangement for Motor Vehicles

Description

The invention concerns a mirror arrangement for motor vehicles in accord with the generic concept of Claim 1.

Mirrors for motor vehicles, especially outside mirrors, are continually incorporating more electronic components, which serve, for example, for the control of positioning motors, for control display devices, and for sensors and the like. DE 199 04 778 A1 discloses, for example, an outside mirror for commercial vehicles, which, during driving in a curve, automatically compensates its position, so that a dead angle in such cases is avoided. The associated electronic components for this action are enclosed within the mirror housing. Since the outside mirror is exposed to wind and weather, these electronic parts installed in the housing must be especially protected against dampness. For this purpose, the electronic components in question and their wiring are advantageously encapsulated in a waterproof material. That is to say, they are placed in a hermetically sealed encasement. If, in the case of maintenance work, the function of the individual components of the mirror are to be examined, then it becomes necessary to reset the said electronic components and their wiring to certain operational positions or states of circuitry. For this purpose it is necessary, that the electronic components be made accessible, which, in the described case, can only be done with considerable demounting operations.

Electronic control apparatuses have been offered as anti-blocking systems, which are placed in the motor space and which exhibit a diagnostic window with a magnetically sensitive circuit. If a magnet is introduced in this area, then a reset is activated. The area of the diagnostic window, in which the magnet sensitive circuit is to be found, is designated with the legend "RESET".

Using DE 199 04 778 as a starting point, it is the purpose of the present invention to formulate a mirror arrangement for motor vehicles, wherein specific alterations of programs and methods of operation are more easily carried out. It is a further purpose of

the present invention to make available a system and a procedure for the execution of a specified program alteration or of a method of operation. This is to be carried out by a circuit and/or a control apparatus integrally incorporated in a mirror arrangement.

The achievement of these purposes is accomplished through the features of the Claims 1 to 10.

Certainly it is within the present state of the technology to reset electronic wiring or control apparatuses by means of a magnetically sensitive switch. However, on an outside mirror for vehicles, because of design reasons, no corresponding markings are provided. It has been shown, however, that such a marking is not necessarily a requirement, since the maintenance person knows at which location behind the mirror housing or where, behind the mirror pane, the magnetic sensitive switch is to be found. By means of the provision of at least one magnetically activated switch to achieve a defined circuit condition or establish an operational mode in the electronic circuit and/or control apparatus in the mirror housing, the desired operational mode, or the condition of the circuit, can be brought about by a magnet of appropriate strength from outside of the mirror housing without any demounting.

This considerably simplifies maintenance work, since no disassembly is necessary for the inspection of the equipment.

In accord with an advantageous embodiment of the invention, as set forth in Claim 2, this activation is carried out by means of permanent magnets. These permanent magnets can be made simply and economically and adjusted to a specified strength.

In accord with an advantageous embodiment of the invention, as set forth in Claim 3, an operational-mode switch is placed directly behind the mirror pane or directly on the inside of the housing. Because of this placement, this switch can specifically be activated, since the activating magnet can be held on a corresponding position on the outside of the housing or on the corresponding position on the outside of the mirror pane.

In accord with another advantageous embodiment of the invention, as shown in Claim 4, the at least one operational-mode switch can also be activated by a multiplicity of magnetic impulses, which impulses, by means of appropriate control of an electromagnet can be generated. In carrying this out, a chance activation of the operational-mode switch is excluded.

In accord with yet another advantageous embodiment of the invention, as taught by Claim 6, the mirror arrangement encompasses a display device, which, optically, or acoustically, or in some other manner indicates, if the respective operational-mode switch has been activated by a magnet.

In accord with a further advantageous embodiment of the invention as shown in Claim 7, the display device is an optical display device, which, by special measure, is integrated into the mirror pane. A corresponding device is made known by DE 199 02 487 A1. The optical display device of this disclosure is placed behind the mirror pane and is only visible, when it is activated. The optical display can be additionally employed for other purposes, which are outlined in said DE 199 02 487 A1. In regard to the details of this display, complete reference is made to DE 199 02 487 A1.

In accord with a further advantageous embodiment of the invention, with reference to Claim 8, the electronic control apparatus encompasses computer equipment and a memory saving device with software stored therein, by means of which software, the magnet-sensitive operational-mode switch or test program can be activated. In this way, for instance, the brilliance of an optical display built into the mirror pane can be suitably adjusted.

In accord with yet another advantageous embodiment of the invention, as set forth in Claim 9, a multiplicity of operational-mode switches is provided, which are placed at different places in the interior of the mirror housing or on the inside of the mirror pane. In this manner, by means of activation of the various operational-mode switches, different functions of the electronic control means can be activated or different test programs set in motion.

By means of the system and the procedure according to Claim 10, in a simple manner, assurance is provided, that the magnet will be placed precisely on the correct position. By means of the template with position markings, faulty misplacements and error positioning in the case of a multiplicity of operational-mode switches are avoided.

By means of the advantageous embodiment of the invention as shown in Claim 11, assurance is given, that the template is placed in a defined manner on the mirror assembly, without additional markings on the surface of the mirror and housing.

The shape of the mirror pane, together with the legend "Top" and/or "Bottom" on the template, provide an error free indication of the position of said template on the mirror arrangement.

In accord with yet another advantageous embodiment of the invention as put forth in Claim 12, the markings on the marked-up template are so printed, that it is immediately evident, which function is called up by the corresponding marking for the particular operational-mode switch. By this means, erroneous services are avoided.

Further details, features and advantages of the invention arise from the following description of a preferred embodiment, as seen with the aid of the drawing. There is shown in:

- Fig. 1 a schematic presentation of a first embodiment,
- Fig. 2 a schematic presentation of a second embodiment,
- Fig. 3 a schematic presentation of a third embodiment,
- Fig. 4 a schematic presentation of a marking template for the embodiment in accord with Fig. 3, and
- Fig. 5 a schematic presentation of a marking template for an embodiment in which the operational-mode switch is located on the inside of the mirror housing.

Fig. 1 shows schematically a first embodiment of the invented mirror arrangement with a mirror housing 2, a mirror pane 4 placed in the mirror housing 2, and an electronic control device 6, which latter likewise is placed in the interior of the mirror housing 2. The electronic control device 6, serves for the control of an optical display device 8 for the control of a gyro-device 10 for the automatic resetting of the mirror pane 4 upon curve driving and for the control of a mirror adjustment 12 for displacement of the mirror in accord with positioning signals generated by switches or bringing the mirror into a placement determined by signals from the gyro-device 10.

At a definite position in the interior of the mirror housing 2, on that side which is remote from the mirror pane 4, is located a magnetically activated operational-mode switch 14. This switch can be energized by means of an activating magnet in the form of a permanent magnet 16. This permanent magnet is situated in an area on the outside of the mirror housing 2, above which, the operational-mode switch 14 on the inner side of the mirror housing 2 is positioned.

By means of the operational-mode switch 14, which can be magnetically activated, certain circuit conditions or methods of operation in the control apparatus 6 can be energized. For instance, by the activation of the operational-mode switch 14, the electronic control apparatus 6 can illuminate the optical display device 8 or the entire displacement zone of the mirror pane 4 can be scanned. In this manner, without the demounting of a single component, the manner of functioning of the functional elements assembled in the mirror housing, that is, the optical display device 8, the gyro-device 10, the mirror positioning apparatus 12 and even the control apparatus 6 can be examined.

Fig. 2 shows a second embodiment example in which the electronic control apparatus 6 controls, besides the mirror positioning apparatus 12, also a temperature sensor 18. The operational-mode switch 14 is, in this case, placed on the back side of the mirror pane 4, and can be activated by means of the positioning of the activation magnet 16, which is on the forward side of the mirror pane 4.

Fig. 3 shows a third embodiment of the invention, in which a multiplicity of operational-mode switches 14-1, 14-2, and 14-3 are located on the rear side of the mirror pane 4. By means of activation of the various operational-mode switches 14-i, various circuit effects or methods of operation may be brought about. Along with this, it is possible, for instance, that with the operational-mode switch 14-1 a testing program for the mirror positioning apparatus 12 can be enabled, while with the operational-mode switch 14-2 a test program for the optical display device 8 can be activated. With the operational-mode switch 14-3 the circuit and/or the control apparatuses can be reset.

In order to avoid a visible marking of the position of the operation-modus switch 14-i behind the mirror pane 4 on the forward side of the mirror pane 4, a marking template 20 has been made, which is shown in Fig. 4. The marking template 20 possesses the outer form of the mirror pane 4 and it outlines markings 22-i, which furnish the individual positions of the operational-mode switch 14-1 behind the mirror pane 4. Additionally, on this template 20 is to be found a legend, which makes plain, which circuit condition, or which method of operation is activated with the respective operational-mode switch 14-i at the position in question. By means of the legend "Bottom", assurance is given that the marking template 20 has been laid on the mirror pane 4 in the correct orientation. In case of maintenance work, the marking

template 20 is employed by the maintenance personnel and this use assures that the activation magnet 16 is positioned at the correct location.

Fig. 5 shows a variant of a marking template 26, which is appropriate for such an embodiment in which the operational-mode switch 14-i is placed on the inner side of the mirror housing 2, as this is the case in the embodiment shown in Fig. 1. The marking template 26 encompasses a principal part 28 with elongated members 30 extending therefrom. The principal part 28 is likewise adapted to the shape of the mirror pane 4. On the elongated members 30 which extend from the principal part 28 are written the legends 22-i for the operational-mode switch 14-i. Likewise on the elongated members 30 the legends 24 are impressed, which provide information as to which function the respective operational-mode switch has. The principal part 28 is preferably rigid and is made, for instance, of cardboard. The elongated members 30 are flexible and allow themselves to be folded up. Upon the laying of the principal part 28 in the proper orientation in accord with the label "Bottom", and wrapping the flexible, extended members 30 around the housing, thus laying these in close contact on the outside thereof. The markings 22-i then provide the exact location of the operational-mode switch 14-i on the inside of the mirror housings. This method provides for the maintenance personnel in a clear and unambiguous way, the position and the function of the individual operational-mode switch 14-i.

It is also possible, that operational-mode switches 14-i are installed both on the rear side of the mirror pane 4 as well as in the interior of the mirror housing 2. In this case, where the marking template 26 is concerned, legends 24 and markings 22-i are placed on the principal part 28.

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In re Application of Heinrich Lang et al.)	
Serial No.: Not Yet Assigned)	Examiner: Unknown
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For: Mirror Arrangement for Motor Vehicles)	

REQUEST FOR APPROVAL OF DRAWINGS CHANGES

Commissioner for Patents
Box Amendment
Washington, D.C. 20231

Sir:

Prior to examination on the merits, Applicants propose amending the drawings in the above-identified application. Applicants have attached hereto a new copy of Figs. 1-5 with proposed amendments shown in red ink.

Applicants respectfully submit that the changes do not add new matter and are supported by the original specification, claims, and drawings. The undersigned invites the Examiner to call at his convenience with any questions regarding the proposed drawing changes or to resolve any issue regarding the present application.

Respectfully submitted,

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March 5, 2002

Date

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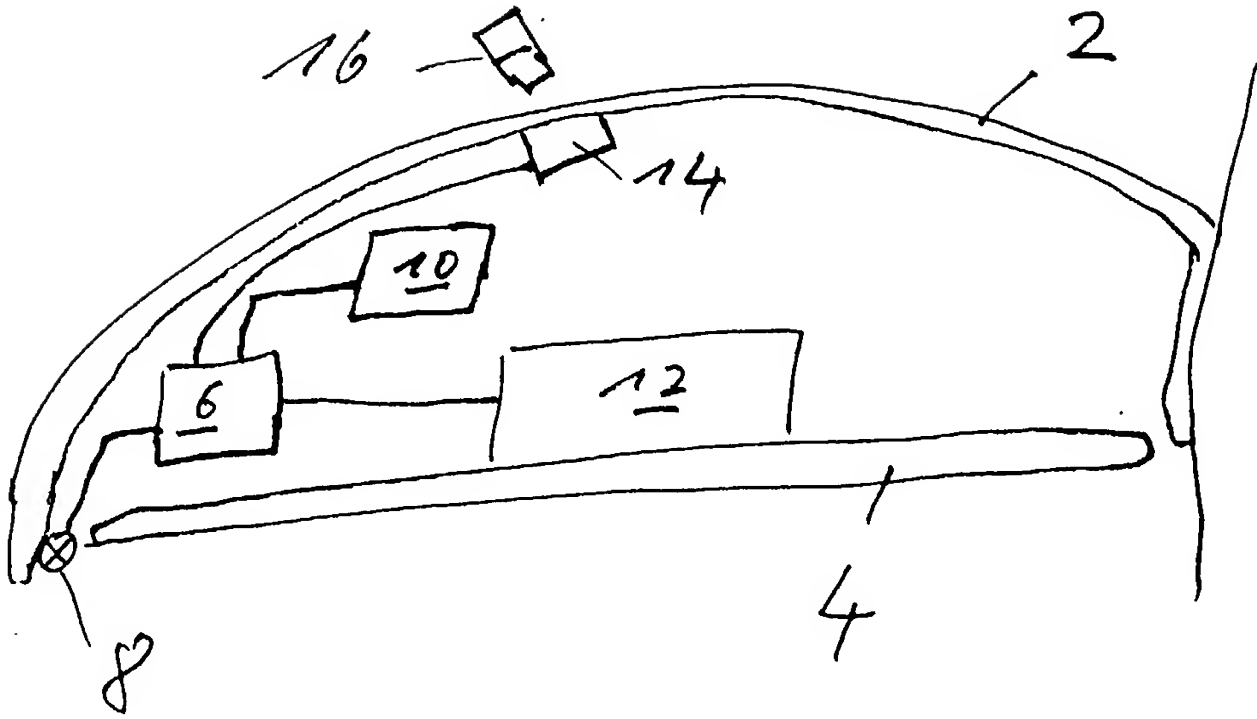


Fig. 1

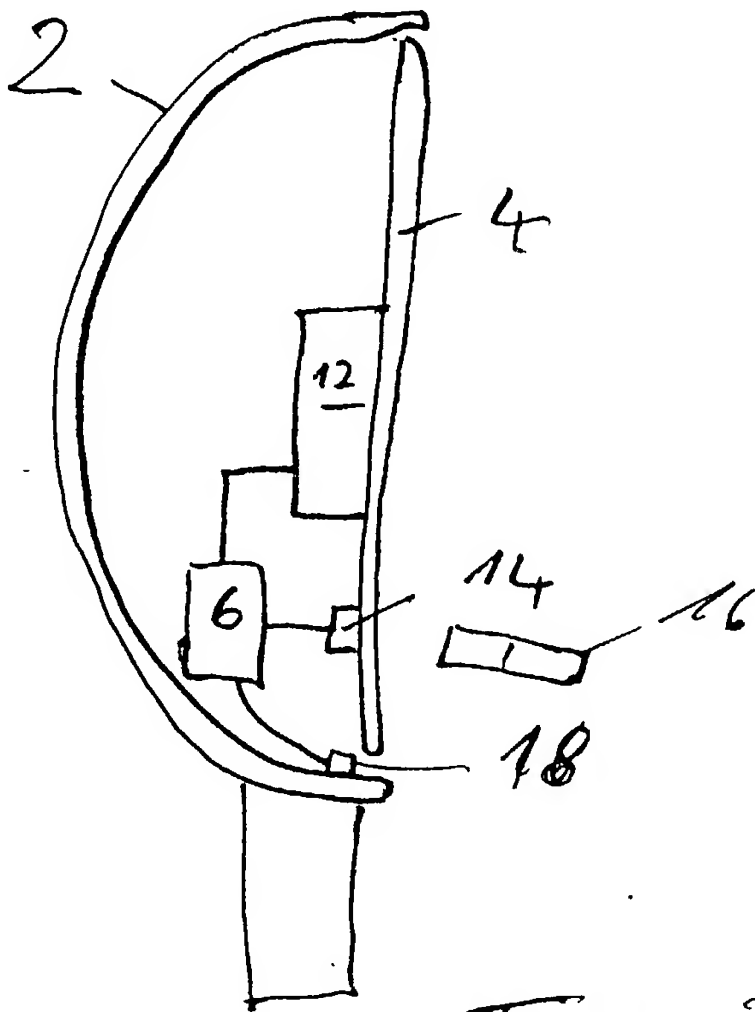


Fig. 2

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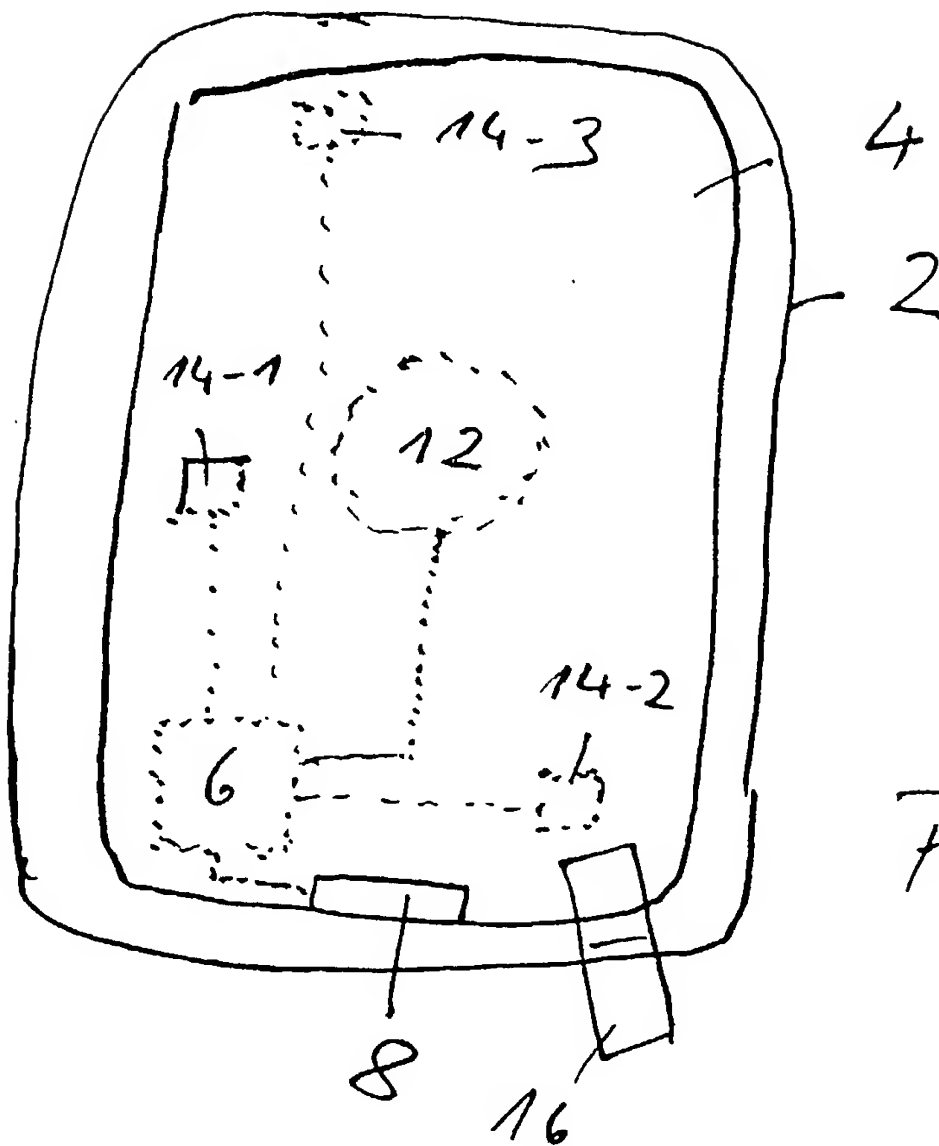


Fig. 3

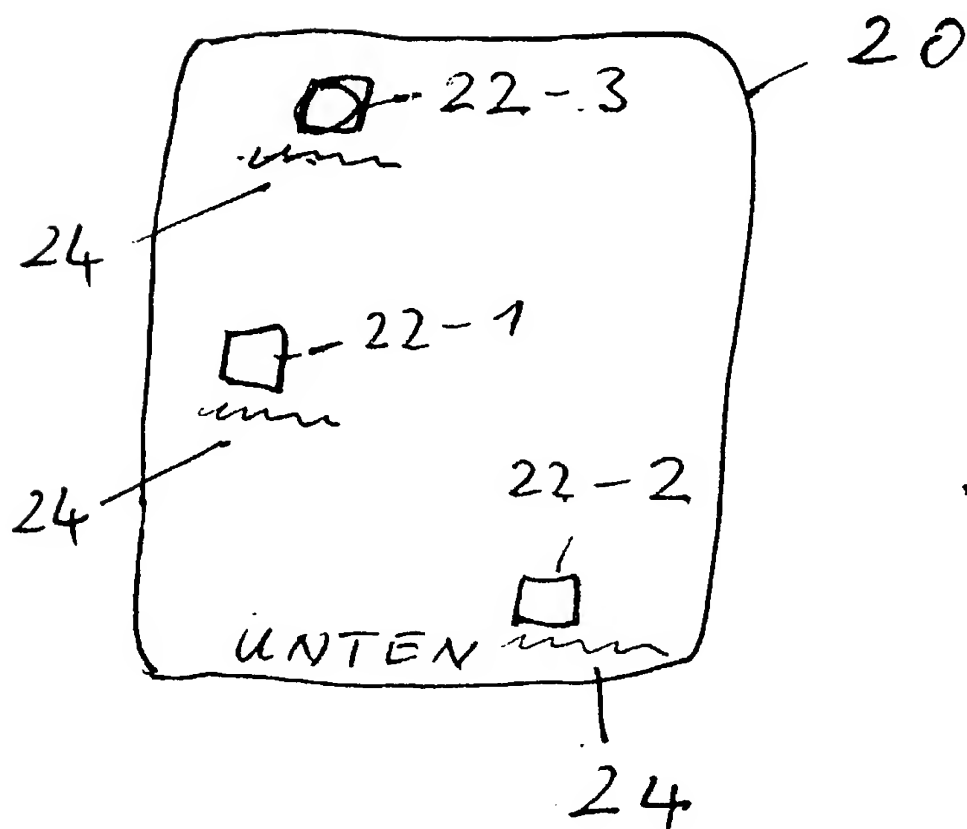


Fig. 4

313

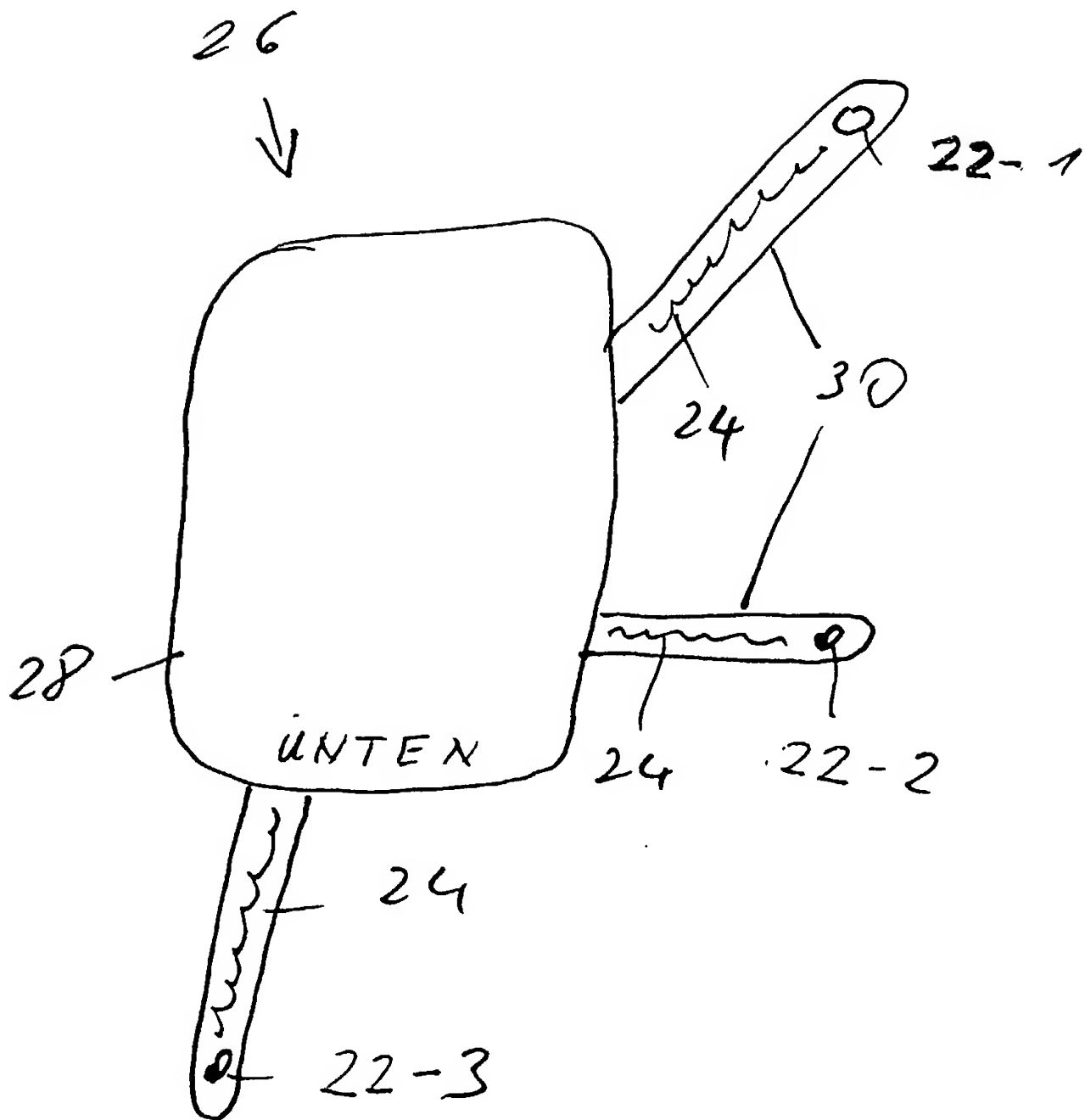


Fig. 5